

What is claimed is:

1. A numerical controller with a sequence control section incorporated therein, the sequence control section comprising:

switching means for successively switching a sequence program to be executed among a plurality of sequence programs, signals for executing instructions of the sequence program being grouped;

a plurality of address tables respectively prepared for the sequence programs, each of said address tables storing top physical addresses for the grouped signals;

selecting means for selecting one of said address tables for the sequence program to be executed; and

determining means for determining a physical address to be accessed for the grouped signal based on information on group designation and an offset address from the top physical address, which is included in an object code associated with the instruction of the sequence program, and the address table selected by said selecting means in execution of the instruction.

2. A numerical controller with a sequence control section incorporated therein, the sequence control section comprising:

switching means for successively switching a sequence program to be executed among a plurality of sequence programs, signals for executing instructions of the sequence program being grouped according to signal type or signal address range;

a plurality of address tables respectively prepared for the sequence programs, each of said address tables storing top physical addresses for the grouped signals;

determining means for determining a top physical address for the grouped signal based on information on group designation, which is included

in an object code associated with the instruction of the sequence program, and one of the plurality of address tables;

calculation means for calculating a physical address for the grouped signal based on the determined top physical address and information on an offset address from the top physical address included in the object code; and

execution means for executing the instruction by accessing the determined physical address for the grouped signal.

3. A numerical controller with a sequence control section incorporated therein, the sequence control section comprising:

an address table storing physical addresses for signals symbolized with symbol information for executing instructions of a sequence program; and

determining means for determining a physical address to be accessed for the symbolized signal based on symbol information included in an object code associated with the instruction of the sequence program, and said address table in execution of the instruction.

4. A numerical controller with a sequence control section incorporated therein, the sequence control section comprising:

switching means for successively switching a sequence program to be executed among a plurality of sequence programs, signals for executing instructions of the sequence program being symbolized with symbol information;

a plurality of address tables respectively prepared for the sequence programs, each of said address tables storing physical addresses for the symbolized signals;

selecting means for selecting one of said address tables for the sequence program to be executed; and

determining means for determining a physical address to be accessed for the symbolized signal based on the symbol information included in an object code associated with the instruction of the sequence program and the address table selected by the selecting means in executing the instruction.

5. A numerical controller with a sequence control section incorporated therein, the sequence control section comprising:

switching means for successively switching a sequence program to be executed among a plurality of sequence programs, signals for executing instructions of the sequence program being grouped according to signal type or signal address range, or being symbolized with symbol information;

address tables respectively prepared for the sequence programs, the address tables including first address tables storing top physical addresses for the grouped signals and second address tables storing physical addresses for symbolized signals;

first determining means for determining a top physical address for the grouped signal based on information on group designation included in an object code associated with the instruction of the sequence program, and one of the first address tables;

calculation means for calculating a physical address to be accessed for the grouped signal based on the determined top physical address and information on an offset address from the top physical address included in the object code;

second determining means for determining a physical address to be accessed for the symbolized signal based on symbol information included in an object code assigned for instruction of the sequence program, and one of the second address tables; and

execution means for executing the instruction by accessing the determined physical address.

6. A numerical controller according to claim 1, 2, 4 or 5, wherein said switching means switches the sequence program to be executed each time when a set time period elapses.

7. A numerical controller according to claim 1 or 4, wherein said selecting means selects one of the address tables in accordance with a table-selection instruction included in the sequence program.

8. A numerical controller according to claim 2 or 5, wherein said sequence control section further comprises selecting means for selecting one of the address tables in accordance with a table-selection instruction included in the sequence program.